

Escambia-Santa Rosa Regional ATMS

Us 98 Signal Retiming and Coordination & Escambia-Santa Rosa Regional Advanced Traffic Management System (ATMS)



May 12, 2016

**John Alaghemand, P.E., DRMP, Inc.
Phillip Kurth, P.E., FTE, Inc.**

Agenda

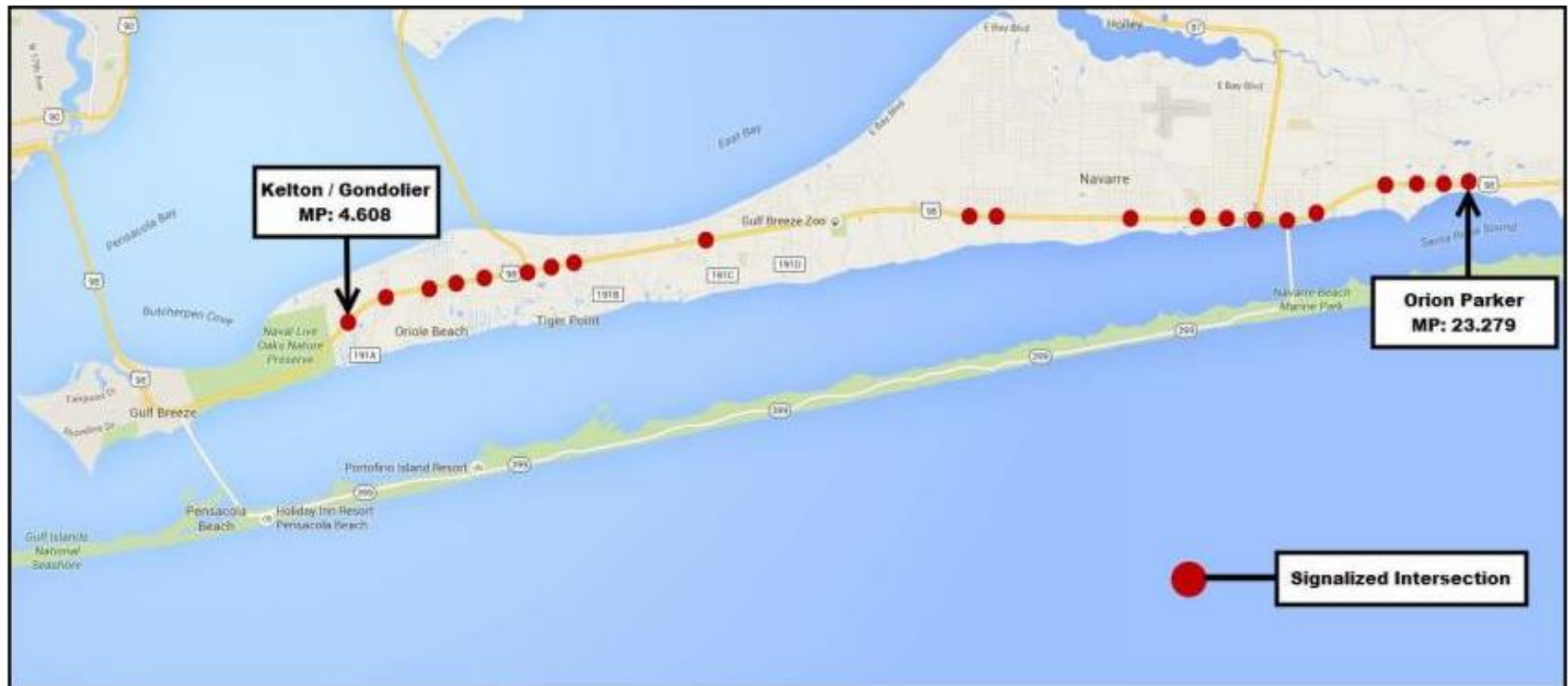
- US 98 Retiming & Coordination Project Overview
- Escambia-Santa Rosa Regional ATMS Feasibility Study and Implementation Plan Update
- ATMS Resolution

Traffic Signal System Operations & Engineering Support

- DRMP, Inc.
 - Regional Traffic Engineering “Champion”
 - Optimize Regional Signal Operations
 - Manage and operate ATMS projects
- Florida Transportation Engineering (FTE)
 - FDOT’S Consultant for US 98 Retiming & Coordination Project

US 98 Signal Retiming & Coordination

- Signal retiming/coordination along US 98 from Kelton Blvd to Orion Dr.
- Approximately 20 miles long
- 21 signalized intersections



US 98 Signal Retiming & Coordination

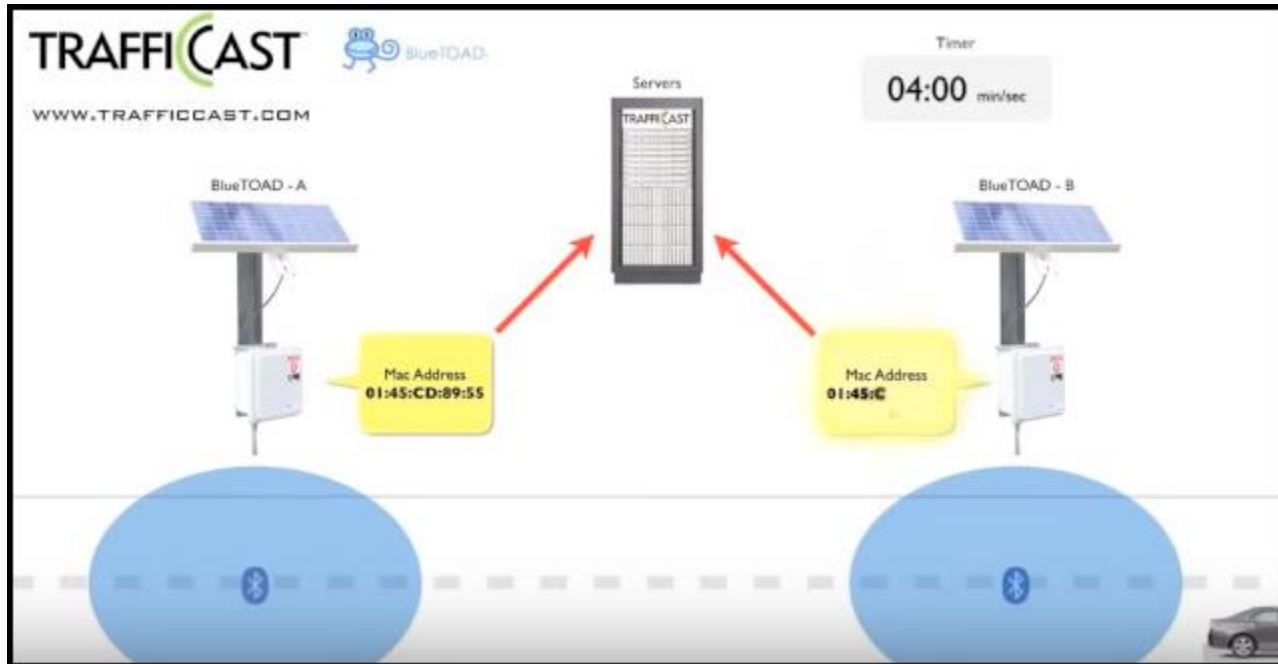
1. SR 30 (US 98) at Orion Parker Drive (SROC 038)
2. SR 30 (US 98) at Whispering Pines Boulevard (SROC 031)
3. SR 30 (US 98) at Wal-Mart Access (SROC 035)
4. SR 30 (US 98) at Panhandle Trail / Navarre Beach Campground (SROC 021)
5. SR 30 (US 98) at Winn Dixie Access (SROC 019)
6. SR 30 (US 98) at Navarre Beach Causeway (SROC 010)
7. SR 30 (US 98) at SR 87 (SROC 018)
8. SR 30 (US 98) at Andorra Street (SROC 032)
9. SR 30 (US 98) at Navarre School Road / Thresher Drive (SROC 017)
10. SR 30 (US 98) at Coral Street (SROC 039)
11. SR 30 (US 98) at Sunrise Drive (SROC 016)
12. SR 30 (US 98) at Edgewood Drive (SROC 046)
13. SR 30 (US 98) at Nantahala Boulevard (SROC 037)
14. SR 30 (US 98) at Tiger Point Boulevard (SROC 015)
15. SR 30 (US 98) at Tiger Point Lane / Portside Drive (SROC 014)
16. SR 30 (US 98) at SR 281 Garcon Point / Avalon (SROC 020)
17. SR 30 (US 98) at Green Briar Parkway / County Club Road (SROC 045)
18. SR 30 (US 98) at College Parkway (SROC 013)
19. SR 30 (US 98) at Oriole Beach Road (SROC 012)
20. SR 30 (US 98) at Whisper Bay Boulevard (SROC 043)
21. SR 30 (US 98) at Kelton / Gondolier Boulevard (SROC 011)

US 98 Signal Retiming & Coordination

- Overview of study process
- Data Collection
- Traffic Analysis
- Implementation of new timing
- Coordination of signals
- Field review & monitoring
- Final Report

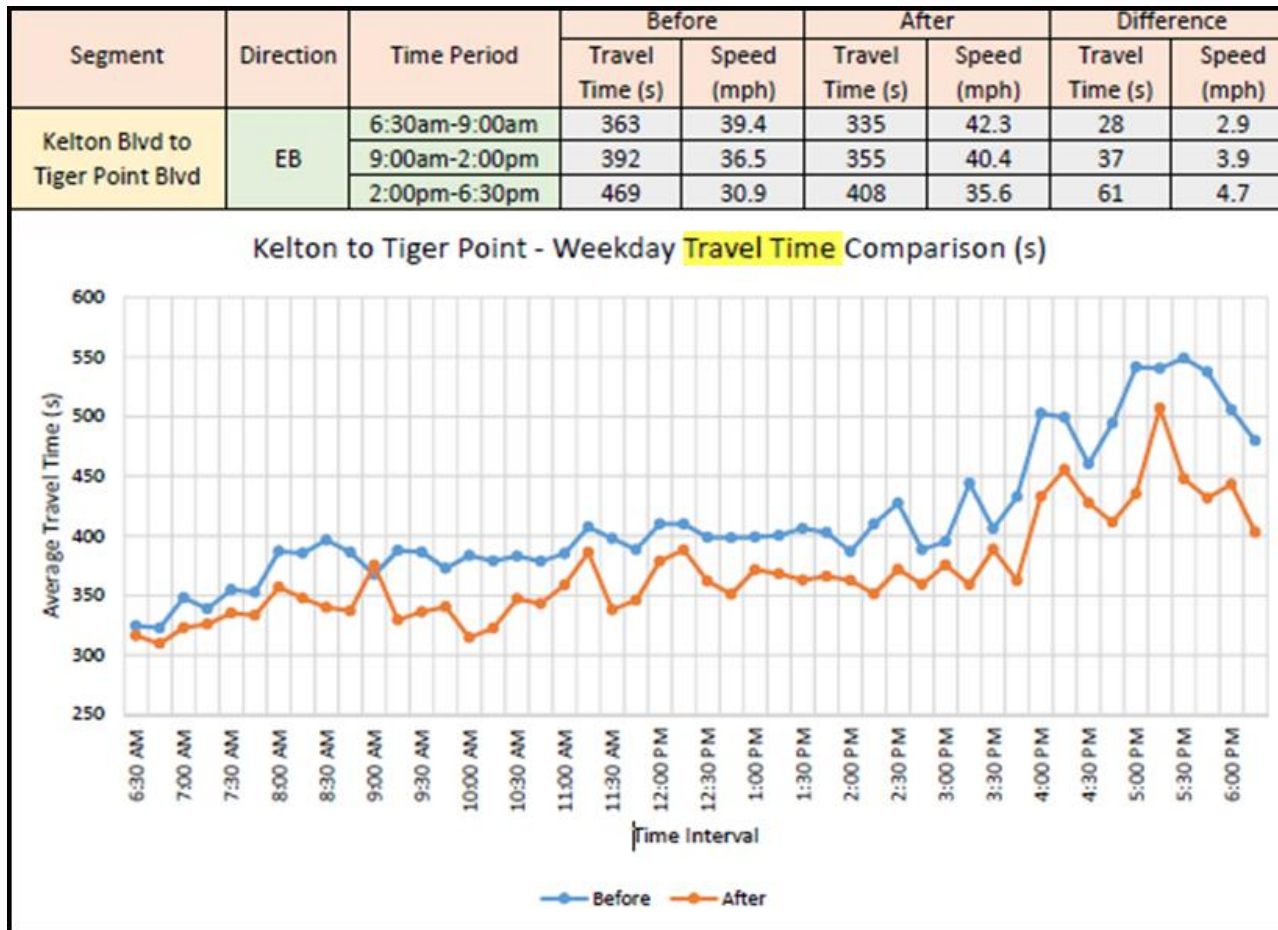
US 98 Signal Retiming & Coordination

Vehicle Travel Time and Delay Studies



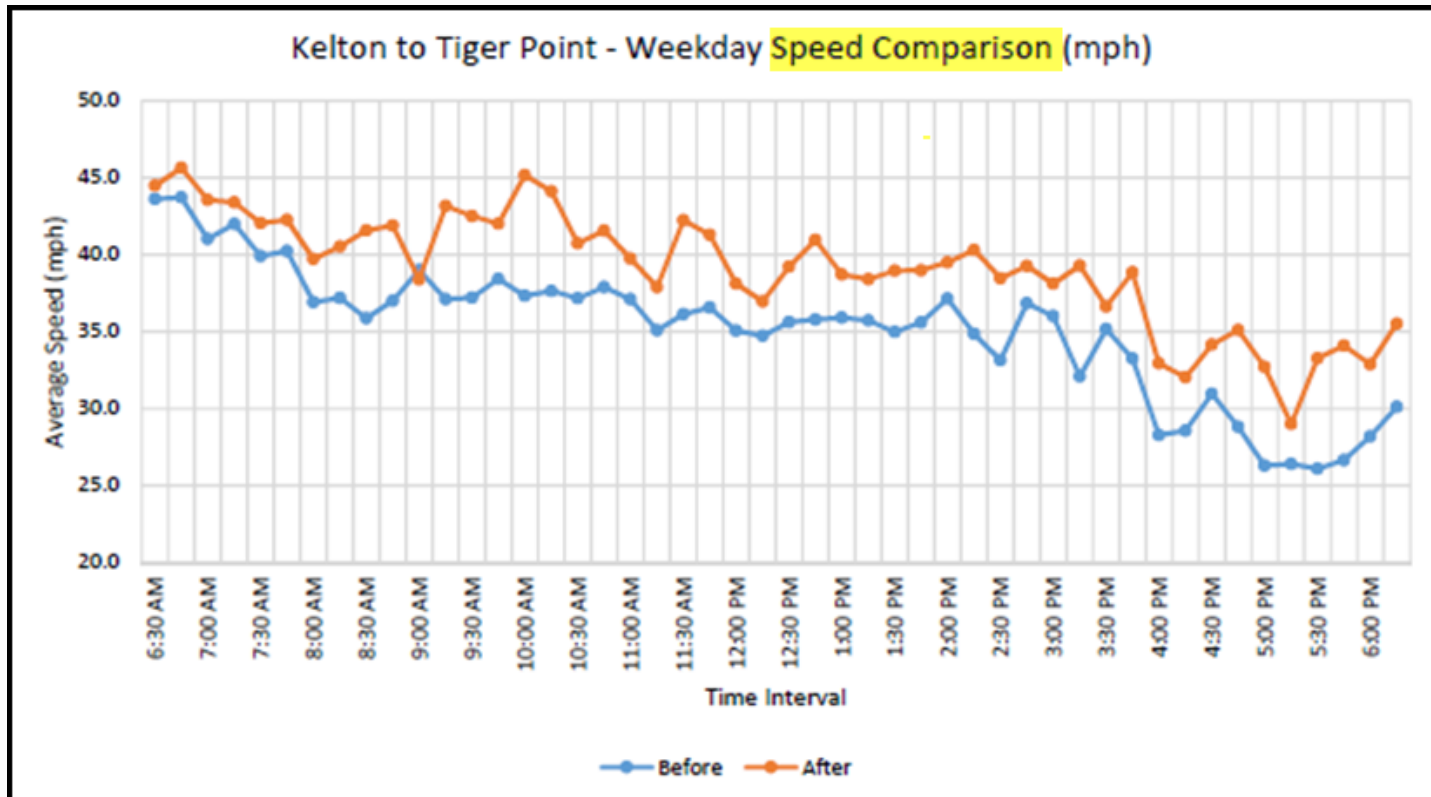
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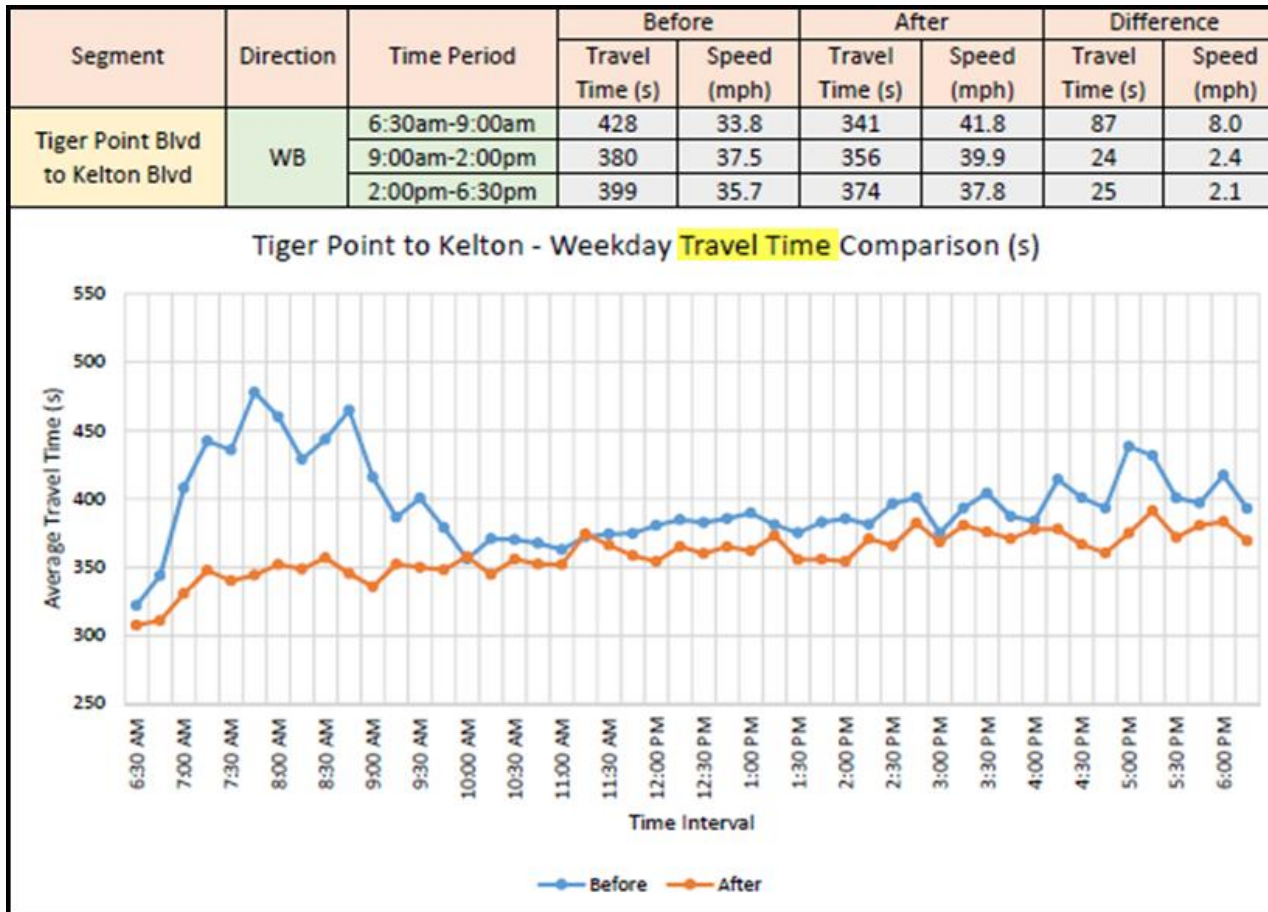
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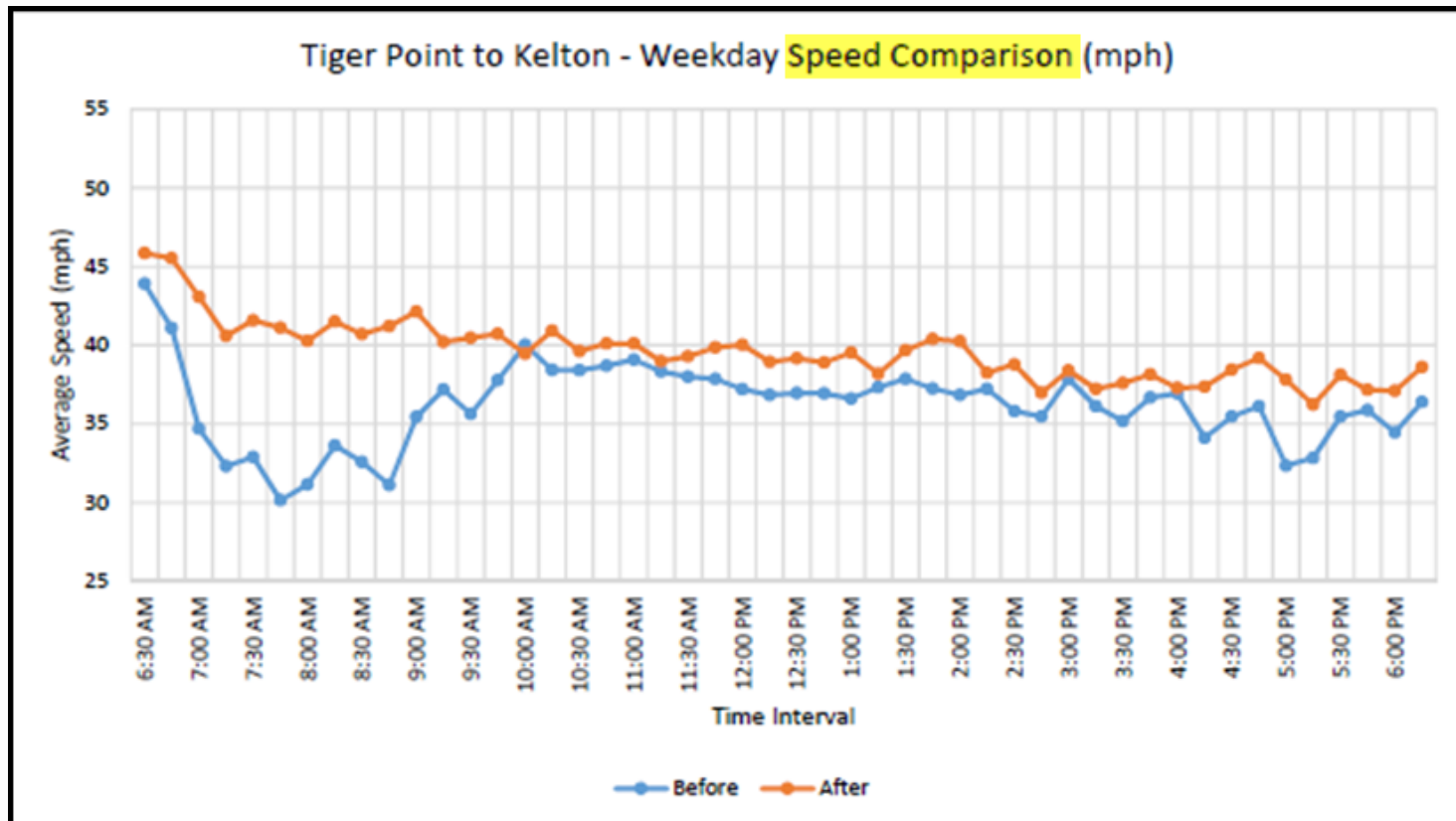
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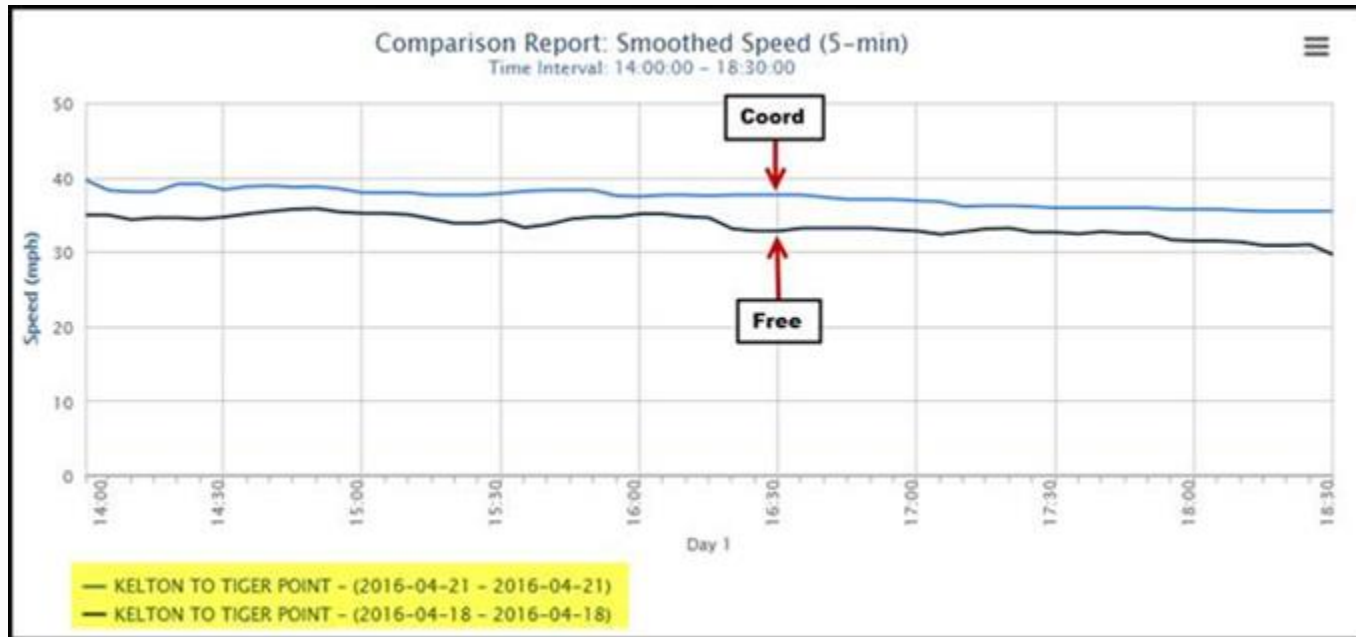
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US 98 Signal Retiming & Coordination

3-Year Benefit to Cost Analysis : Travel Time Benefits

Travel Time Benefits				
Reduction in Travel Time (Vehicle-Hours)				
Roadway Segments	AM Period	Mid Day Period	PM Period	Weekend
Orion Parker to Navarre School Road	54.6	59.4	141.1	99.8
Tiger Point to Kelton / Gondolier Blvd	123.9	101.7	163.1	101.5
Isolated System and Intersections	25.8	2.8	37.8	19.2
Weekly Travel Time Savings (Hours)				3,991.90
Yearly Travel Time Savings (Hours)				207,578.80
Value of Time (per Hour)*				\$15.60
*Bureau of Labor Statistics for Santa Rosa County				
Travel Time Benefit - Year 1				\$3,238,229.28
Travel Time Benefit - Year 2				\$2,590,583.42
Travel Time Benefit - Year 3				\$1,942,937.57
Total Project Travel Time Benefit				\$7,771,750.27

US 98 Signal Retiming & Coordination

3-Year Benefit to Cost Analysis : Fuel Saving Benefits

Fuel Savings Benefits				
Reduction in Fuel (Gallons)				
Roadway Segments	AM Period	Mid Day Period	PM Period	Weekend
Orion Parker to Navarre School Road	135.0	294.0	423.0	486.0
Tiger Point to Kelton / Gondolier Blvd	242.5	442.5	526.5	427.5
Weekly Fuel Savings (gal)				12,144.50
Yearly Fuel Savings (gal)				631,514.00
Value of Fuel Savings*				\$2.11
*Current AAA Value of Greater Pensacola Area				
Fuel Savings Benefit - Year 1				\$1,332,494.54
Fuel Savings Benefit - Year 2				\$1,065,995.63
Fuel Savings Benefit - Year 3				\$799,496.72
Total Project Fuel Savings Benefit				\$3,197,986.90

US 98 Signal Retiming & Coordination

3-Year Benefit to Cost Analysis : Crash Reduction Benefits

Safety Benefits	
Reduction in Reported Collisions	
Pre-Implementation Crash Ratio per Week	5.00
Post-Implementation Crash Ratio per Week	4.50
Estimated Yearly Reduction in Crashes	24
Average Crash Cost by Facility Type	\$152,103.00
*FDOT State Safety Office Bulletin 14-01	
Total Project Safety Benefit	\$3,650,472.00

Total Project Benefits	\$14,620,209
Total Project Costs	\$164,115
Project Benefit / Cost Ratio	89/1

Escambia-Santa Rosa Regional ATMS

Advanced Traffic Management System (ATMS) includes:

- Intelligent Transportation System (ITS) components
 - Wireless and wired communications
 - Networking
 - Traffic signals
 - Detection devices
 - Dynamic Message Signs
 - CCTV cameras
- Regional center-to-center communications (EOC, FHP, EMS, etc.)
- Traffic Management Center (TMC)

The Florida-Alabama TPO has designated the Escambia-Santa Rosa Regional ATMS Project as the number one (1) priority

Benefits of ATMS

- Reduce travel times
- Reduce maintenance costs
- Reduce fuel consumption
- Reduce emissions
- Reduce accidents
- Improve safety
- Improve freight transit
- Improve parking management
- Improve transit efficiency
- Improve incident response time
- Improve emergency evacuation
- Negate need for costly retiming projects
- Aid economic growth in region by maximizing efficiencies in the **existing** transportation network



Benefits of ATMS

FHWA* Estimated ATMS Benefits - Based on previous studies expected benefits from implementing an ATMS are:

- 25% travel delay reduction
- 30% incident duration reduction
- 12.5% crash reduction
- 17:1 Benefit/cost ratio (based on reduction in delay and the cost for operations and maintenance)

* FHWA ITS Benefits, FHWA TSM&O Benefit Cost Analysis for Arterial Operations.

Escambia-Santa Rosa Regional ATMS

- City of Pensacola contracted with Atkins, Inc.
- Notice to Proceed: May 13, 2015
- Four Stakeholders Meetings: June, July & Sept. 2015 and March 2016
- 50% Complete
 - User needs defined
 - Existing conditions documented
 - Technology review completed
 - Alternative analysis in review
 - Operation & Maintenance concepts developed
- Left to Complete
 - Regional TMC concept development
 - Finalize implementation plan
- Projected completion: Summer 2016

ATMS Resolution

- To advance the ATMS Study, a non-binding Resolution expressing support for a unified ATMS and TMC for the Escambia County and Santa Rosa County region will be submitted for the Board's consideration

Draft ATMS Resolution

RESOLUTION NUMBER

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF SANTA ROSA COUNTY, FLORIDA EXPRESSING ITS SUPPORT FOR THE CONSTRUCTION AND OPERATION OF A REGIONAL ADVANCED TRAFFIC MANAGEMENT SYSTEM AND MANAGEMENT CENTER FOR ESCAMBIA COUNTY, SANTA ROSA COUNTY, THE CITY OF PENSACOLA, THE CITY OF GULF BREEZE; PROVIDING FOR TRANSMITTAL TO THE LEGISLATURE; AND DATE.

WHEREAS, the Advanced Traffic Management System (ATMS) includes computerized signal systems, communication technologies integrated into traffic management systems, monitoring/detection subsystems, and use of existing transportation systems; and

WHEREAS, the ATMS includes computerized signal systems and certain Intelligent Transportation System (ITS) components, including communications and networking, traffic signals, dynamic message signs (DMS), closed-circuit television (CCTV) video monitoring, incident detection, data collection and monitoring system, traffic operations center, regional center-to-center communications, and a public information portal; and

WHEREAS, the benefits of an ATMS include improved safety, improved air quality mitigation, improved congestion mitigation, improved emergency response, improved regional growth adaptability, improved evacuations, improved system communications, improved cross-jurisdictional traffic flow, improved integration of transportation systems, improved regional security, improved transportation agency operations, and reduced operations and maintenance costs by providing capabilities to remotely troubleshoot hardware and traffic operations before sending a technician to a traffic signal, and

WHEREAS, the development of ITS components such as an ATMS, Advanced Traveler Information, and Emergency Management Systems is an effective and efficient method to improve public safety, reduce fuel consumption, and reduce traffic congestion; and

WHEREAS, the Florida-Alabama Transportation Planning Organization (TPO) has designated the Escambia-Santa Rosa Regional ATMS Project as the number one priority in the TPO's Fiscal Year 2017 - 2021 Project Priority list; and

WHEREAS, the Florida-Alabama TPO has established an ITS subcommittee comprised of technical staff from participating local agencies meeting monthly to provide oversight of the development and implementation of the regional ITS/ATMS improvement; and

WHEREAS, the Florida Department of Transportation (Department) recently completed the implementation of the ATMS Phase I on Brent Lane from North Palafox Street to North 12th Avenue, on North Palafox from Brent Lane to East Fairfield Drive, and on East Fairfield Drive from North Palafox Street to North 12th Avenue; and

WHEREAS, the Department funded and entered into a Joint Project Agreement (JPA) with the City of Pensacola to administer the development of the Escambia-Santa Rosa Regional ATMS Feasibility Study and Implementation Plan project which will be a blueprint for the

- Express support for a unified regional ATMS
- Agree to establish interagency cooperation for the unified regional ATMS

ATMS within Escambia County and Santa Rosa County. The Regional ATMS Feasibility Study and Implementation Plan

It has encouraged the creation of a unified regional ATMS, and for the design, construction, operation, and maintenance of

operation and maintenance of the ATMS at a regional Transportation Center to provide enhanced safety by streamlining communication and

IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF SANTA ROSA COUNTY, FLORIDA, AS FOLLOWS:

Santa Rosa County Board of County Commissioners finds the above resolution and incorporates them herein by reference.

Section 2. That the Santa Rosa County Board of County Commissioners hereby expresses its support for the Department's administration of the design and construction of a regional ATMS and a regional TMC for Escambia County, Santa Rosa County, the City of Pensacola, the City of Milton, and the City of Gulf Breeze.

Section 3. That the Santa Rosa County Board of County Commissioners will endeavor to establish interagency cooperation and coordination for the joint development, operation, and maintenance of a regional TMC to operate the regional ATMS through a regional Transportation Management Team.

Section 4. That this resolution shall take effect immediately upon its adoption by the Board of County Commissioners.

Section 5. That the Clerk shall forward a copy of this Resolution to James T. Barfield, District Three Secretary, FDOT.

ADOPTED this ____ day of _____, 2016.

BOARD OF COUNTY COMMISSIONERS SANTA ROSA COUNTY, FLORIDA

By: _____
Chairman

ATTEST:

County Clerk

(SEAL)

Advanced Traffic Management System

Questions?